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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,631	11/21/2003	Satoshi Ueda	SON-2850	9147
23353 7590 05/14/2007 RADER FISHMAN & GRAUER PLLC LION BUILDING 1233 20TH STREET N.W., SUITE 501 WASHINGTON, DC 20036			EXAMINER SINKANTARAKORN, PAWARIS	
			ART UNIT 2616	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/717,631	Applicant(s) UEDA ET AL.	
	Examiner Pao Sinkantarakorn	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 6, 7, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Hurvig et al. (US 6,507,592).

**Regarding claims 1, 6, and 10**, Hurvig et al. disclose a communication apparatus (see column 3 lines 65-67) having a network device connected to a network to be used for outputting and receiving packets to and from the network (see column 3 lines 65-67, two-way communication), the communication apparatus comprising:

time measurement means for measuring a time on the basis of a clock signal (see column 6 lines 60-67, the clock generator means measures and generates a clock signal) having a predetermined frequency (see column 7 lines 19-26, the clock generator means generates a clock frequency of 10, 66, or 100 MHz) ;

transmission process means for receiving information data from an application at a higher level, packetizing the information data (see column 5 lines 60-67, the processor

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generates at the processor level and insert the output time stamp value into each outgoing data packet and subsequently transfer the time-stamped outgoing data packet to the interface unit memory area), outputting the packet to the network by way of the network device and saving sender information including a transmission time of the packet (see column 5 lines 63-64, the time-stamped outgoing packet is transferred to the interface unit memory area waiting to be outputted based on the time stamp value);

reception process means for receiving a predetermined packet from the network by way of the network device (see column 6 lines 31-33, an MPEG stream is received via the input buffer means), generating receiver information including an arrival time of the packet by using the time measurement means (see column 6 lines 44-47 and column 12 lines 26-30, the incoming packets are provided with respective time stamp values by the sampling circuit); saving the receiver information (see column 5 lines 28-30, the input buffer means may store time-stamped incoming data packets before they are transferred to the interface unit memory), depacketizing the packet to obtain predetermined information data (see column 12 lines 47-56) and outputting the predetermined information data to an application at a higher level (see column 12 lines 37-40, program running on the CPU fetches the stored frames in the frame memory area); and

data control means for controlling flows of the information data (see column 12 lines 37-46, the data frame management fetches the incoming packets stored in the frame memory area and also handles the generation of outgoing data packets).

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**Regarding claim 3**, Hurvig et al. disclose a communication apparatus, wherein the reception process means includes:

storage means for storing time information showing a point of time measured by the time measurement means as a packet arrival time for each reception of a packet (see column 12 lines 26-28); and

reception-state examination means for examining a state at a reception time by the time information, which is generated continuously (see column 12 lines 47-56, the data packet management detects a MAC frame which contain a specific time indicator for upstream synchronization of slots).

**Regarding claim 7**, Hurvig et al. disclose a transmission apparatus having a network device connected to a network to be used for outputting a packet to the network, the transmission apparatus comprising:

payload storage means for temporarily storing information data received from an application at a higher level as a payload of the packet (see column 5 lines 60-67, the processor generates and inserts the output timestamp value into each outgoing data packet and transfer the timestamped outgoing packet to the interface unit memory area);

determination means for determining whether or not the information data received from the application at a higher level includes predetermined attached information to be attached to the packet (see column 5 lines 28-42, the output buffer means have a number of device registers, which are capable of reading the parameters of the data reception and transmission processes, e.g. the number of bytes of an

incoming or outgoing data packets which is stored at a time in the input and output buffer means, so that it can control the parameters of the data reception and transmission processes)

attached-information storage means for extracting the attached information from the information data received from the application at a higher level and temporarily keeping the attached information (see column 5 lines 60-67, the processor generates and inserts the output timestamp value into each outgoing data packet and transfer the timestamped outgoing packet to the interface unit memory area);

control means for allocating an area in the payload storage means as an area to be used for storing the attached information (see column 5 lines 20-24 and 29-37, the input buffer means and the output buffer means have a number of registers which may control specific parameters, e.g. the number of bytes of an incoming data packets which is stored at a time in the input buffer means or the output buffer means); and

attached-information write means for writing the attached information kept temporarily in the attached-information storage means into the area allocated by the control means as an area to be used for storing the attached information (see column 5 lines 29-42).

### ***Claim Rejections - 35 USC § 103***

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hurvig et al. in view of Ngo (US 6,510,150).

**Regarding claim 2**, Hurvig et al. disclose all the subject matter of the claimed invention except a communication apparatus, wherein the communication apparatus further comprising a management-packet process means for: transmitting the management-information packet to the network by way of the network device; and acquiring the management-information packet generated by another communication apparatus.

The invention of Ngo from the same or similar fields of endeavor discloses a means for generating and distributing timestamp values among all transceivers in the network (see column 4 lines 50-55).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a means for generating and distributing timestamp values among all transceivers in the network as taught by Ngo into the communication apparatus of Hurvig et al.

The motivation for implementing a means for generating and distributing timestamp values among all transceivers in the network is that it increases efficiency of all the devices in the network.

**Regarding claim 4**, Hurvig et al. disclose a communication apparatus, wherein the reception process means includes correction means for correcting the time measurement means so as to control the time measurement means of a transmitting communication apparatus on the basis of the transmission time information (see column 7 lines 55-59).

However, Hurvig et al. do not disclose a means for comparing transmission time information included in a received packet as a transmission point of time measured for the packet by the time measurement means of the transmitting communication apparatus with time information showing a point of time measured as an arrival time of the packet by the time measurement means.



The invention of Ngo from the same or similar fields of endeavor discloses a means for comparing the received timestamp value and the local time stamp value and calculate the offset based on the comparison (see column 7 see lines 5-14).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a means for comparing the received timestamp value and the local time stamp value and calculate the offset based on the comparison as taught by Ngo into the communication apparatus of Hurvig et al.

The motivation for implementing a means for comparing the received timestamp value and the local time stamp value and calculate the offset based on the comparison is that it increases efficiency of the communication apparatus.

**Regarding claim 5**, Hurvig et al. disclose a communication apparatus, wherein the reception process means includes: storage means for storing transmission-time information, which is included in a first packet received after initialization, as a transmission point of time measured for the packet by the time measurement means of the transmitting communication apparatus (see column 12 lines 26-28); time-measurement start means for driving the time measurement means to start a measurement of time upon reception of the packet (see column 12 lines 22-25, a free-running counter is clocked by a clock signal provides a current timestamp value upon reception of each incoming packet);

However, Hurvig et al. do not disclose a communication apparatus, wherein the reception process means includes: addition means for adding data of time information generated by the time measurement means as a result of the measurement to data of

the transmission-time information stored in the storage means; and time information generation means for generating time information synchronized with time information generated by the time measurement means of the transmitting communication apparatus.

The invention of Ngo from the same or similar fields of endeavor discloses a means for: adding an offset value to the current timestamp value stored in the timestamp counter and timestamp register (see column 7 lines 5-14); and generating a new timestamp value synchronized with the received timestamp value transmitted by another communication apparatus (see column 7 lines 5-16, the process repeats until the WT gets in sync with the BS).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a means for: adding an offset value to the current timestamp value stored in the timestamp counter and timestamp register; and generating a new timestamp value synchronized with the received timestamp value transmitted by another communication apparatus as taught by Ngo into the communication apparatus of Hurvig et al.

The motivation for implementing a means for: adding an offset value to the current timestamp value stored in the timestamp counter and timestamp register; and generating a new timestamp value synchronized with the received timestamp value transmitted by another communication apparatus is that it increases efficiency of the communication apparatus.

7. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hurvig et al. in view of Yin (US 5,926,458).

**Regarding claim 8,** Hurvig et al. disclose all the subject matter of the claimed invention except a communication apparatus, wherein the control means further has transmission control information write means for monitoring a result output by the determination means and a total amount of the information data stored in the payload storage means to determine whether or not a predetermined transmission condition is satisfied and writing information necessary for the transmission of the packet into the area allocated in the payload storage means as an area to be used for storing the transmission control information if the transmission condition is satisfied.

However, the invention of Yin from the same or similar fields of endeavor discloses a system comprising an outgoing buffer coupled to a packet scheduler, wherein the packet scheduler receives queue status information, which include information indicating whether a particular queue is full or empty, and the queue server allocates an area in the queue to be used for storing the data packet (see column 4 lines 41-64).

Thus, it would have been obvious to implement a system comprising an outgoing buffer coupled to a packet scheduler, wherein the packet scheduler receives queue status information, which include information indicating whether a particular queue is full or empty, and the queue server allocates an area in the queue to be used for storing the data packet as taught by Yin into the communication apparatus of Hurvig et al.

The motivation for implementing a system comprising an outgoing buffer coupled to a packet scheduler, wherein the packet scheduler receives queue status information, which include information indicating whether a particular queue is full or empty, and the queue server allocates an area in the queue to be used for storing the data packet is that it increases efficiency of the communication apparatus by preventing the overflow problem in a buffer.

**Regarding claim 9**, Hurvig et al. disclose all the subject matter of the claimed invention except the transmission control information write means: writes transmission request information making a request for execution of the transmission of the packet into the payload storage means as the transmission control information if the transmission condition is satisfied; and further has transmission control means for monitoring the transmission control information to execute the transmission of the packet in accordance with the transmission control information if the request information for execution of the transmission of the packet is detected.

The invention of Yin from the same or similar fields of endeavor discloses a transmission control information write means: writes transmission request information making a request for execution of the transmission of the packet into the payload storage means as the transmission control information if the transmission condition is satisfied; and further has transmission control means for monitoring the transmission control information to execute the transmission of the packet in accordance with the transmission control information if the request information for execution of the transmission of the packet is detected (see column 4 lines 41-64, Module provides the

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bandwidth allocation information for each queue to packet scheduler and, based on the information received from the module, packet scheduler determines which queue will be serviced next).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a transmission control information write means: writes transmission request information making a request for execution of the transmission of the packet into the payload storage means as the transmission control information if the transmission condition is satisfied; and further has transmission control means for monitoring the transmission control information to execute the transmission of the packet in accordance with the transmission control information if the request information for execution of the transmission of the packet is detected as taught by Yin into the communication apparatus of Hurvig et al.

The motivation for implementing a transmission control information write means: writes transmission request information making a request for execution of the transmission of the packet into the payload storage means as the transmission control information if the transmission condition is satisfied; and further has transmission control means for monitoring the transmission control information to execute the transmission of the packet in accordance with the transmission control information if the request information for execution of the transmission of the packet is detected is that it increases efficiency of the communication apparatus.

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**Conclusion**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Knobbe et al. (US 6,868,069) and Fischer et al. (US 6,975,655) are cited to show systems/methods considered pertinent to the claimed invention.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pao Sinkantarakorn whose telephone number is 571-270-1424. The examiner can normally be reached on Monday-Thursday 9:00am-3:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PS



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